



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,040	08/17/2001	Fareid A. Asphahani	296	2673

7590 08/28/2003

Krieg Devault Lundy, LLP
825 Anthony Wayne Building
203 E. Berry Street
Fort Wayne, IN 46802

EXAMINER

CHARIOUI, MOHAMED

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. .	Applicant(s)
	09/931,040	ASPHAHANI ET AL.
	Examiner	Art Unit
	Mohamed Charioui	2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 August 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-23 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) 3.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show pressure sensor 70 as described in the specification in page 9 and components 42 as described in page 11. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figure 8 is objected to for the following informalities: the devices FMC and SMC are numbered 20 and 24 respectively in the drawing, whereas, in the specification, FMC and SMC are numbered 22 and 26 respectively.

Specification

2. The disclosure is objected to because of the following informalities: in page 9, lines 8-13, it is explained that the motion tracking unit 24 includes he rate sensor 26 and it is located above ankle 14; however, Figure 1 shows the device 26 is located under the ankle 14.

The disclosure is objected to because of the following informalities: in page 8, lines 13-20, Applicant refers to detachable plantar pressure collection unit 20 and motion tracking unit 20, it is unclear why the Applicant is referring to these two devices with the same number.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-8, 10, 11, 13, 15-21 and 23** rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al.

As per claims 1, 2, 5, 10, 11, 13, 15, 18, 21 and 23, Kirtley teaches a portable human gait analysis apparatus for releasable securement about a user's foot that comprises a detachable sole (see paragraph [0016]); a plantar pressure collection unit positioned between a plantar side of the user's foot and the detachable sole (see paragraph [0039]; a rear-foot motion collection unit having at least one accelerometer sensor and at least one rate sensor and a lower shank motion collection unit having at least one accelerometer sensor and at least one rate sensor (see paragraphs [0004] and [0012]); a detachable processing unit in electrical communication with the plantar pressure collection unit, the rear-foot motion collection unit, and the lower shank motion collection unit, the detachable processing unit for processing data from a plurality of accelerometers and sensors (see paragraphs [0013], [0020] and [0021]); a visual display unit in electrical communication with the detachable processing unit for displaying the data processed by the processing unit (see paragraphs [0003], [0017] and [0034]).

Kirtley fails to explicitly teach a soft casing unit having a detachable sole cover, a detachable foot cover, a detachable shank cover, and a releasable securement means for releasably and adjustably securing the detachable sole cover, the detachable foot cover, and the detachable shank cover about the user's foot.

Darley et al. teach this structure (see col. 4, lines 40-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Darley et al.'s teaching into Kirtley's invention because it would provide numerous locations in the shoe where the mounting units would be secured to. Therefore, flexibility of the mounting of the device around the user's foot would be provided and accurate measurements would be taken without creating a burden on the user's foot.

As per claims 4 and 17, Kirtley further teaches that past and current data is stored in memory, and processed by the central processing unit for comparison between use (see paragraphs [0005] and [0020]).

As per claims 6 and 19, Kirtley further teaches that the data from the central processing unit passes through an I/O unit to a telemetry unit (see paragraph [0040]).

As per claims 7 and 20, Kirtley further teaches that the data from the telemetry unit is transferred to at least one of: a walkman, a TV, a VCR, a DVID player, a CID player, a projection unit, a game console, a stereo and an internet site for entertainment purposes (see paragraph [0017]).

As per claim 8, Kirtley further teaches that the central processing unit processes data from the plurality of accelerators and sensors to determine pronation, supination

and normal data based upon data received from the sensors (see paragraphs [0017] and [0029]).

As per claims 3, 16 and 23, Kirtley in view of Darley et al. teach the system as stated above except for independent measurements are taken for the user's right foot and left foot, and the processing and display units function independently for each foot. Since Kirtley discloses that the system used perform and display the measurements on a single foot. It would obvious to one having ordinary skill in the art at the time the invention was made to use the same system on the other foot, because both system would be operating independently of each other. Therefore, independent measurements would be taken for the user's both right and left feet independently.

4. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and McTeigue et al.

Kirtley in view of Darley et al. teach the system as stated above except that the user's body weight is calibrated by the central processing unit to provide a baseline for processing data.

McTeigue et al. teach this feature (see col. 17, line 50 to col. 18, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate McTeigue et al.'s teaching into the teachings of Kirtley in view of Darley et al. because the body weight must be calibrated to a predefined weight so the processor would perform more accurate calculations. Therefore, the results displayed would be meaningful and reliable in determining the user's performance.

5. **Claims 12 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and O'Heir.

Kirtley in view of Darley et al. teach the system as stated above except that the plantar pressure collection unit positions force sensor resistors and pressure sensors along a first phalange, a second phalange, a third phalange, a fourth phalange in the forefoot, along a first metatarsal head, a second metatarsal head, and a fourth metatarsal head in the forefoot, along a first metatarsal base, a fourth metatarsal base and a fifth metatarsal base in the midfoot, underneath a distal portion of a medial and lateral side of a calcaneus in the midfoot, and at the medial and lateral surfaces of the calcaneus in the rearfoot, to provide accurate measurement of maximum pressure, mean pressure, and pressure line.

O'Heir teaches configuration (see col. 4, lines 23-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate O'Heir's teaching into the teachings of Kirtley in view of Darley et al. because it would position the shoe sole pressure sensors under every bone of the foot so that the pressure applied by the entire foot bottom will be sensed. Therefore, the measured pressure would be more accurate and result would be more meaningful and reliable in determining the user's performance.

6. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and Gray et al.

Kirtley in view of Darley et al. teach the system as stated above except that the processing and display unit provides a color coded mapping data, which has been normalized by body weight calibration.

Gray et al. teach this feature (see col. 8, line 52 to col. 9, line 25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Gray et al.'s teaching into the teachings of Kirtley in view of Darley et al. because it would a visual indication to whether the body within the predefined calibration range or not. Therefore, the user can initiate a body weight calibration before the measurements are taken so that the results will be more accurate.

Prior art

7. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Damen et al. ['856] disclose method and system for measuring for measuring performance during an exercise activity and an athletic shoe for use in system.

Fyfe et al. ['964] disclose motion analysis system.

Ebeling et al. ['389] disclose pedometer effective for both walking and running.

Gill ['919] disclose sandal having independently adjustable straps.

Contact information

8. Any inquiry concerning this communication from examiner should be directed to Mohamed Charioui whose telephone number is 703 605-4362. The examiner can normally be reached Monday to Friday 9 am to 6 pm.

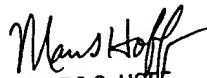
Art Unit: 2857

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached at 703 308-1677. The fax phone number for the organization where this application is assigned is 703 305-3431.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose number is 703 308-0956.

Mohamed Charioui

5/9/03


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800